

Work Order ID 62176

Monday, September 20, 2010 10:27:20 AM



Page 1

Item ID: D205-634-041

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 9/20/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 10/4/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

[Signature]

Date: 10-9-20

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2580

Rev D

100

0.00



DC

DOCUMENT CONTROL

Memo

0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG002

N/A CK 10/11/03

110

0.00



CNC Bend I

BENDING MACHINE - SKIDTUBES

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio 16

2-Cut tubes as per Dwg. D2580

3- scribe batch# in aft end of tube

DP 10-9-27

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

H:\FORMS\Quality Assurance\approved QA\NCRWO RevE

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Revision ID:

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Start Date: 9/20/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 10/4/2010 Req'd Qty: 1.00

Customer:

Reference:

Run Start

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200

0.00



HandFinish

Hand Finishing

Memo

0.00

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of

Sikaflex on insert holes before installing wearplates

A/R ☐ ☐ ☐ Sikaflex-291 ☐ 11/18/10

Sikaflex expire date: 11/01

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as
per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with

Sikaflex. Clean excess adhesive

A/R ☐ ☐ ☐ Sikaflex-291 ☐ 11/11/10

Sikaflex expire date: 11/01

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch: 1111228

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Picklist Print

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Work Order ID: 62176

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 9/20/2010

Required Date: 10/4/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C10L NAS1149C0332 Purchased No

200

Each

29.0000

50

50



washer



el 10/10/06

D3566-13 Manufactured No

200

Each

14.0000

1

1



Gasket



el 10/10/06

D3566-5 Manufactured No

200

Each

15.0000

1

1



Gasket



el 10/10/06

D3566-1 Manufactured No

200

Each

20.0000

2

2



Gasket



el 10/10/06

D3566-1 Manufactured No

200

Each

20.0000

2

2



Gasket



el 10/10/06

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Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Work Order ID: 62176



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 9/20/2010

Required Date: 10/4/2010

Start Qty: 1.00

Required Qty: 1.00

D3564-11

 Manufactured No
 Wearshoe

200 Each 7.0000



1
 1
 10/10/06

Location Loc Qty Loc Code

FP019 7
 60302 7

D3564-13

 Manufactured No
 Wearshoe

200 Each 13.0000



1
 1
 10/10/06

Location Loc Qty Loc Code

FP17 13
 59660 1
 60862 12

D3564-9

 Manufactured No
 Wearshoe

200 Each 11.0000



1
 1
 10/10/06

Location Loc Qty Loc Code

FP 1
 55334 1
 FP019 10
 60236 10

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Work Order ID: 62176

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 9/20/2010

Required Date: 10/4/2010

Start Qty: 1.00

Required Qty: 1.00

D3564-5

Manufactured No

200

Each

15.0000

1

1



Wearshoe



21 10/10/06

Location

Loc Qty

Loc Code

FG

1

34806

1

FP19

8

57525

1

58709

1

61699

6

FP-19

6

60868

6

21

D2594-3

Manufactured No

200

Each

1,083.000

16

16



O-Ring, 205 Skidtube



21 10/10/06

Location

Loc Qty

Loc Code

FP

83

55546

19

58191

12

59358

52

fpa

1000

61762

1000

216

D2594-1

Manufactured No

200

Each

227.0000

16

16



Plug, 205 Skidtube



21 10/10/06

Location

Loc Qty

Loc Code

FP

183

42807

112

55002

71

FP14

44

58434

15

59110

29

B61932

216

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Page 6

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DART

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

RELEASED
07-06-28 *[Signature]*

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

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SUBJ
WITH
WORK
NO. *[Signature]*
[Signature]

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:
SEE NOTES ON
PAGE 2 FOR D2580-041 AND
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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CHECKED	APPROVED		
DATE			

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RELEASED
07-11-28

Diagram illustrating the grinding locations on the propeller cross-section:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- LOCATION RIDGE ON UNDERSIDE OF D2576

Diagram illustrating the installation of a bolt on a circular plate. The diagram shows a circular plate with a central hole. A bolt is shown passing through the plate, secured with a washer and nut. The bolt is labeled "AN3-SA BOLT (1)" and the washer is labeled "AN960JD10L WASHER (1) (2 PLACES)". The bolt is secured with a "D2855 CAP". The plate is labeled "SEAL WITH SIKAFLEX-241/-291". The bolt is labeled "DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)". The bolt is labeled "0.40".

D2579 SPACER

D2596 WEB (REF)

ALS7-1032-130 (REF)
(TYP 50 PLACES)

AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X .45"
2. INSERT D2579 SPACERS (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C-BORE D2579 SPACER TO #0.437 X 1.00 DEEP

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

37.50
DISTANCE TO AFT END
OF D2598 WEB

3
7

1.750
1.750

#0.508 (TYP.)
(40 PLACES)

REFER TO DETAIL E


REFER TO DETAIL A

8.750
17.375
26.000
34.188

57.313 (REF)
7 EQUAL SPACES
B.188 PITCH

38.0
91.500
190.0
(D2500-1)

[illegible][illegible]

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	CHECKED	APPROVED		DRAWING NO.	REV. D
	DATE			TITLE	SHEET 3 OF 3
	07.02.27			205 SKIDTUBE ASSEMBLY	SCALE 1:24

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NO. 238

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 61352
Part number: D205-634-041
Description: 205 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier: P. D. D. Date of Test Coupon 10.08.25
Welder: Barclay Elliott Date of Test Coupon 10.08.25

The above named individual is qualified in accordance with AWS D17.1.2001 to weld